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MODEL 5303083-002

2.9 – 3.3 GHz
2400 WATTS
PULSED POWER RF
T/R AMPLIFIER

Solid State Pulsed High Power RF Amplifier

The 5303083-002 is a 2400 Watt band-specific pulsed amplifier that covers the 2.9 – 3.3 GHz frequency range. This small and lightweight amplifier utilizes Class A/AB pulsed power devices that provide an excellent efficiency, high gain, superb pulse fidelity, and a wide frequency range.

Due to robust engineering and employment of the most advanced devices and components, this amplifier achieves high efficiency operation with proven reliability.

<u>Transmit</u>	<u>Parameter</u>	<u>Specification @ 25° C</u>
<u>Electrical</u>		
1	Frequency Range	2.9 – 3.3 GHz
2	Peak Output Power	2400 Watts @ 2.9 to 3.3GHz
3	Pulse Width	0.5us to 100uS
4	Duty Cycle	10% maximum
5	Power Gain	+23 dB min
6	Gating pulse	350nS prior and post RF pulse
7	Input/Output VSWR	2:1 max
8	Harmonics	-50 dBc
9	Spurious Signals	> -70 dBc
10	Pulse Droop	0.25dB max
11	Efficiency	40%
12	DC Input Voltage	50 VDC Primary voltage
13	RF Input Signal Format	Pulse
14	Class of Operation	A/AB
<u>Indications</u>		
15	Analog Temperature	0.7V equals to 35°C
16	Temp fault	"High" is fault, trigger shut down
17	Over current fault	"High" is fault trigger shut down
18	Under voltage fault	"High" is fault trigger shut down
19	Fwd and Rev Det Fault	"High" is fault <1KW for Tx is fault 2:1 for Rev is fault, TX is gated
<u>Control</u>		
20	TTL Gating	"Low" is transmit "High" is blanked
21	TTL Remote shutdown	"High" is transmit "Low" - shut down
22	Fault Reset	Toggle remote shut down
<u>Protection</u>		
23	Temperature Protection	Above 70°C
24	VSWR Protection	By active limiter, module will be shutdown when VSWR is higher than 2:1



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<u>Receive</u>	<u>Parameter</u>	<u>Specification @ 25° C</u>
<u>Electrical</u>		
27	Frequency Range	2.9 – 3.3 GHz
28	Rx Gain	20dB +/-1dB
29	Rx Noise Figure	2.8dB max
30	Maximum Rx power handling	450W @ 100uS 10% 1500W @ 70uS 3%
31	Output P1dB compression	+10 dBm min
32	Output power @ Psat	15dBm max
33	Input/Output VSWR	2:1 max
34	Spurious Signals	> -70 dBc
<u>Environmental</u>		
35	Baseplate Temperature	-30° C to +40° C
36	Operating Humidity	95% Non-condensing
37	Operating Altitude	Up to 10,000' Above Sea Level
38	Shock and Vibration	Normal Truck Transport



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